Application Number 10/797,911

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

Claim 1 (Currently Amended): A ~~G~~gesture-based input device for a user interface of a computer ~~comprising~~comprising:

- two pairs of electrodes scalable for any screen ~~size~~size, wherein the electrodes are arranged to capture ~~the~~a quasi-electrostatic field surrounding ~~the~~a user in order for the ~~graphic~~ user interface to provide different options or tasks to be selected by ~~a~~the user,
- a platform for supporting ~~a~~the user,
- a quasi-electrostatic field generator source connected to the ~~platform~~platform; and
- a circuitry connected to the electrodes for determining, relative to each of the electrodes, ~~the~~a position of ~~that~~a part of ~~a~~the user ~~supported by the platform, e.g. a user's hand,~~ being closest to electrodes,
- wherein the position of the part of the user in each dimension of the electrodes is determined based on ~~the~~a relation of four voltage signals of the circuitry, respectively, each voltage signal indicating ~~the~~a distance between the part of the user and the respective electrode,
- whereby the position within the electrode closest to the part of the user is determined without any calibration of the sensor ~~system~~system.

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Claim 2 (Currently Amended): The ~~G~~gesture-based input device according to claim 1, wherein

$$V_H = \frac{|Uo|_L}{|Uo|_R}$$

$$V_V = \frac{|Uo|_B}{|Uo|_T}$$

is utilized to cancel ~~the~~an environment effect ~~which at the same time~~ and remove ~~the~~a calibration process before use of the input device by the user ~~to use it.~~, and U_O is the output signal from the correspondent electrode.

Claim 3 (Currently Amended): The ~~G~~gesture-based input device according to claim 1 or 2, usable to provide ~~the~~ flexibility for the user to define ~~the~~a hand movement range ~~according to one's habit~~, wherein

$$X = \frac{V_H}{V_{H\max} - V_{H\min}} L_X$$

$$Y = \frac{V_V}{V_{V\max} - V_{V\min}} L_Y$$

~~it~~ also ~~provide the possibility for~~allow the user to move forward and backward freely before the screen in a range of around 1 meters.

Claim 4 (Currently Amended): The ~~G~~gesture-based input device according to claim 2, wherein, when the determined position of the part of the user is left substantially unchanged for a predetermined period of time, this is interpreted as selecting an option or task offered to the user through the user interface represented by the ~~QEFS~~quasi-electrostatic field.

Claim 5 (Currently Amended): The ~~G~~gesture-based input device according to any one of claims 1 to 3, wherein the sensor field comprises a screen and a cursor moved and positioned according to the movement and position of the part of the user.